

REMARKS

Applicants express appreciation to the Examiner for consideration of the subject patent application. This communication is in response to the Office Action mailed October 15, 2010, in which the following actions were taken:

(1) claims 6, 14-15, and 27-28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite;

(2) claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0169320 of Tomotake et al. (hereinafter “Tomotake”) in view of U.S. Patent No. 6,443,568 to Askeland et al. (hereinafter “Askeland”);

(3) claims 3, 12, 13, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of U.S. Patent No. 6,412,935 to Doumaux (hereinafter “Doumaux”);

(4) claims 5, 6, 15, 21, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of U.S. Patent Publication No. 2002/0192003 of Koike et al. (hereinafter “Koike”);

(5) claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of U.S. Patent No. 6,450,632 to Tsang et al. (hereinafter “Tsang”);

(6) claims 31 and 38-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike;

(7) claims 32 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and further in view of Askeland;

(8) claims 33, 36, and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and Askeland and further in view of Doumaux; and

(9) claim 35 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and Askeland and further in view of Tsang.

Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Claim Amendments

Claims 6, 15, and 28 are each amended to further clarify the antecedent basis for the latex particulates recited therein. This is not a narrowing amendment, and no new matter is added.

Claim Rejections - 35 U.S.C. § 112

The Examiner has rejected claims 6, 14-15, and 27-28 under § 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14 and 27

The Examiner has stated that the term “predominantly” in claims 14 and 27 renders those claims indefinite. Applicants respectfully disagree with the Examiner’s assertion that one of ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention. On the contrary, the word “predominantly” already has a plain meaning, and those of skill in the art would readily accord the term that meaning in the absence of a further definition. That is, when “predominantly” is used to modify a descriptive term is known to indicate that the descriptive term applies to a majority of the things described. In the case of claims 14 and 27, which specify that certain latex particulates are “predominantly from 20 nm to 500 nm in size and predominantly from 10,000 Mw to 2,000,000 Mw,” one of ordinary skill would recognize that at least a majority (more than half) of the particulates fall within the recited ranges. In accordance with the plain meaning of the term, this recitation is clear and unambiguous. Therefore, the limitation apprises one of skill in the art of the claim scope. Applicants submit that claims 14 and 27 meet the requirements of § 112, 2nd paragraph, and request the withdrawal of the rejection.

Claims 6, 15, and 28

Though not mentioned in a statement of rejection, the Examiner has also pointed to claims 6, 15, and 28, stating that the limitation “the latex particulates” in these claims have more than one antecedent basis. Without conceding that these claims were deficient under § 112, 2nd paragraph, Applicants point out that these claims have been amended as the Examiner has

suggested. Applicants submit that claims 6, 15, and 28 meet the requirements of § 112, 2nd paragraph.

Claim Rejections - 35 U.S.C. § 103

Rejection over Tomotake in view of Askeland

The Examiner has rejected claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland.

In order to most succinctly explain why the claims presented herein are allowable, Applicants will direct the following remarks primarily to the independent claims 1 and 17 with the understanding that once an independent claim is allowable, all claims depending therefrom are allowable. Applicants submit that the cited references are not fairly combinable so as to support a *prima facie* case of obviousness against claims 1 and 17.

Tomotake discloses a method for enhancing gloss in ink-jet images, comprising selecting a parameter (*w*) based on recording density and colored particle characteristics, and further utilizing particular print head scanning direction protocols. See Abstract; paragraphs 0033-0038. As the Examiner has acknowledged, Tomotake does not teach a fixer composition or the use thereof. Applicants point out that one effect of using fixer compositions on a printed image is a significant decrease in the gloss of the image. In accordance with a method for maximizing gloss, Tomotake avoids the use of fixer compositions, which would be expected to undo the intended benefits of the method. Instead, Tomotake teaches fixing the printed image through fusion filming using heat and pressure, particularly high heat for a short time. Paragraphs 0141-0142. Applicants have found that employing calendaring under specific conditions can unexpectedly remedy the loss of gloss following use of a fixer. This unexpected result is not indicated in Tomotake, or in Askeland. Askeland teaches fixer compositions, but does not teach the combination of fixer with calendaring. Therefore, there is no rationale in the references to modify Tomotake to include a fixer composition.

The Examiner has also acknowledged that neither Tomotake nor Askeland teach application of heat in the temperature range required by claims 1 and 17. Rather, Tomotake teaches use of higher heat (100 - 200°C), while Askeland does not teach any particular level of heat. However, the Examiner has asserted that it would be obvious to decrease the heat in Tomotake based on that reference's teaching of the deleterious effects of excessive heat.

Applicants point out that the cautionary teaching of Tomotake pertains to limiting the maximum heat used in the method. Paragraph 0142. This discussion follows the clear teaching that the method calls for “apply[ing] heat with heat source as high as possible to give sufficient amount of quantity of heat within short period.” That is, Tomotake teaches applying as intense a heat as can be employed without damaging the medium. The corollary teaching of Tomotake, therefore, is that 100°C is a strict minimum, where using lower heat would likely be unsuccessful. As such, Tomotake and Askeland fail to teach or fairly suggest every element of claims 1 and 17.

Therefore, Applicants respectfully submit that Tomotake and Askeland fail to present a *prima facie* case that claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 are obvious, and urge the Examiner to withdraw the rejection.

Rejection over Tomotake and Askeland in view of Doumaux

The Examiner has rejected claims 3, 12, 13, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of Doumaux. The deficiencies of the combination of Tomotake and Askeland with respect to the elements required by claims 1 and 17 are discussed above and incorporated here. As each of the rejected claims depends from one of claims 1 or 17, those deficiencies also apply to this rejection.

The Examiner has cited Doumaux to provide a teaching of the particulars of crashing agent recited in claims 3, 12, 13, and 19. However, there is no rationale in Doumaux for combining the teachings Tomotake and Askeland, or teaching or suggestion of the heating required by the claims and lacking in those references. Furthermore, Doumaux is not directed to printing aqueous ink-jet inks on offset media. Rather, Doumaux teaches the use of porous or semi-porous media. See, e.g. col. 1, lines 41-42; col. 2, lines 35-52. Applicants have explained that the particular considerations involved in printing with aqueous ink-jet ink on offset media are different from printing with other media, particularly porous media which is completely different from offset media. Porous media is designed to receive aqueous ink into pores, whereas offset media is typically very smooth and repellant to aqueous ink. The media types are quite opposite from one another.

The Examiner has asserted that Doumaux teaches coated paper that meets the requirements of the claims. Applicants point out that Doumaux teaches media coated with a porous or semi-porous alumina or silica coating. Col. 2, lines 35-39. That is, the media is

porous, and the coating disclosed actually increases that porosity. Applicants maintain that this coated media is different from offset media as Applicants have described and is known in the art.

In view of the above, Applicants respectfully submit that claims 3, 12, 13, and 19 are patentable over the cited references, and urge withdrawal of the rejection.

Rejection over Tomotake and Askeland in view of Koike

The Examiner has rejected claims 5, 6, 15, 21, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of Koike. The deficiencies of the combination of Tomotake and Askeland with respect to the elements required by claims 1 and 17 are discussed above and incorporated here. As each of the rejected claims depends from one of claims 1 or 17, those deficiencies also apply to this rejection.

The Examiner has cited Koike to provide a teaching of an overcoat composition comprising latex particulates as required by claims 5, 6, 15, 21, and 28. Applicants submit however, that Koike fails to remedy the deficiencies of Tomotake and Askeland. Furthermore, Koike does not teach an overcoat composition for overprinting on a printed image as required by the present claims. Rather, Koike teaches a laminated product in which an image is printed on a recording material and then is laminated with a resin image protective layer. Paragraphs 0048, 0061-0064. An overcoat layer can then be disposed on the image protective layer rather than on the printed image. Paragraph 0071. Therefore, Applicants submit that the method and associated apparatus in Koike does not provide the arrangement of elements and steps required by the present claims.

In view of the above, Applicants respectfully submit that claims 5, 6, 15, 21, and 28 are patentable over the cited references, and urge withdrawal of the rejection.

Rejection over Tomotake and Askeland in view of Tsang

The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and further in view of Tsang. The deficiencies of the combination of Tomotake and Askeland with respect to the elements required by claim 1 are discussed above and incorporated here. Those deficiencies also apply to the rejection of claim 11, which depends from claim 1.

The Examiner has cited Tsang to provide a teaching of cationic polymer crashing agents recited in claim 11. However, Tsang also fails to remedy the deficiencies of Tomotake and Askeland. Applicants are not the first to use crashing agents *per se*, but rather, claim the inventive combination set forth in the claims. Therefore, Applicants submit that the cited combination of references fails to present a *prima facie* case of obviousness against claim 11. Withdrawal of the rejection is respectfully requested.

Rejection over Tomotake in view of Koike

The Examiner has rejected claims 31 and 38-41 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike.

In order to most succinctly explain why the claims presented herein are allowable, Applicants will direct the following remarks primarily to the independent claim 31 with the understanding that once an independent claim is allowable, all claims depending therefrom are allowable.

Independent claim 31 is directed to a system for printing durable ink-jet ink images. The system includes offset media, an aqueous ink-jet ink having a pigment colorant and dispersed latex particulates, an overcoat composition, and a calendaring device. The ink-jet ink is configured to be ink-jetted onto the offset media. The overcoat composition includes a liquid vehicle having latex particulates dispersed therein and is also configured to be overcoated with respect to the ink-jet ink. The latex particulates are present in the overcoat composition at from 0.1 wt% to 15 wt%. The calendaring device is configured for applying pressure and heat to offset media once the ink-jet ink is ink-jetted thereon. The pressure is mechanical pressure applied at from 500 psi to 3000 psi, and the heat to be applied is from 20-90°C.

The Examiner has acknowledged that Tomotake fails to teach the application of heat in the temperature range required by claim 31. As discussed above, Tomotake teaches applying as intense a heat as can be employed without damaging the medium. As such, the value 100°C is taught in Tomotake as a strict minimum temperature, as using lower heat in the disclosed method would likely be unsuccessful. Applicants submit therefore, that Tomotake fails to suggest the heating element of the claims. Koike does not remedy this deficiency. Furthermore, Applicants point out that Koike does not teach an overcoat composition for overprinting with respect to the

ink-jet ink as required by the present claims. As such, Tomotake and Koike fail to teach or suggest every element of claim 31.

In view of the above, Applicants respectfully submit that claims 31 and 38-41 are patentable over the cited references, and urge withdrawal of the rejection.

Rejection over Tomotake and Koike in view of Askeland

The Examiner has rejected claims 32 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and further in view of Askeland. The deficiencies of the combination of Tomotake and Koike with respect to the elements required by claims 32 and 34 are discussed above and incorporated here. Those deficiencies also apply to the rejection of claim 32, which depends from claim 31. As also discussed above, there is insufficient rationale to support modifying Tomotake to include the teaching of Askeland. That is, including the use of fixer in the method of Tomotake would be expected to render an unsuccessful result without recourse to the teaching of Applicants' specification.

In view of the above, Applicants respectfully submit that claims 32 and 34 are patentable over the cited references, and urge withdrawal of the rejection.

Rejection over Tomotake, Koike, and Askeland in view of Doumaux

The Examiner has rejected claims 33, 36, and 37 under 35 U.S.C. § 103 as being unpatentable over Tomotake in view of Koike and Askeland and further in view of Doumaux. The deficiencies of the combination of Tomotake, Askeland, and Koike with respect to the elements required by claims 31 and 32 are discussed above and incorporated here. As each of the rejected claims depends from claim 32, those deficiencies also apply to this rejection.

The Examiner has cited Doumaux to provide a teaching of the particulars of crashing agent recited in claims 33, 36, and 37. However, there is no teaching in Doumaux that remedies the deficiencies discussed above. Furthermore, for the reasons cited above, Applicants submit that Doumaux is nonanalogous art and therefore inappropriate to a case of obviousness of the present claims.

In view of the above, Applicants respectfully submit that claims 33, 36, and 37 are patentable over the cited references, and urge withdrawal of the rejection.

Rejection over Tomotake, Koike, and Askeland in view of Tsang

The Examiner has rejected claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and Askeland and further in view of Tsang. The deficiencies of the combination of Tomotake, Koike, and Askeland with respect to the elements required by claim 31 are discussed above and incorporated here. Those deficiencies also apply to the rejection of claim 35, which depends from claim 31.

The Examiner has cited Tsang to provide a teaching of cationic polymer crashing agents recited in claim 11. However, Tsang fails to remedy the particular deficiencies discussed above. Therefore, Applicants submit that the cited combination of references fails to present a *prima facie* case of obviousness against claim 35. Withdrawal of the rejection is respectfully requested.

CONCLUSION

In light of the above, Applicants respectfully submit that the pending claims are now in condition for allowance. Therefore, Applicants request that the rejections be withdrawn, and that the claims be allowed and passed to issue. If any impediment to the allowance of these claims remains after entry of this Amendment, the Examiner is strongly encouraged to call Gary Oakeson at (801) 566-6633 so that such matters may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 08-2025.

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Respectfully submitted,

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